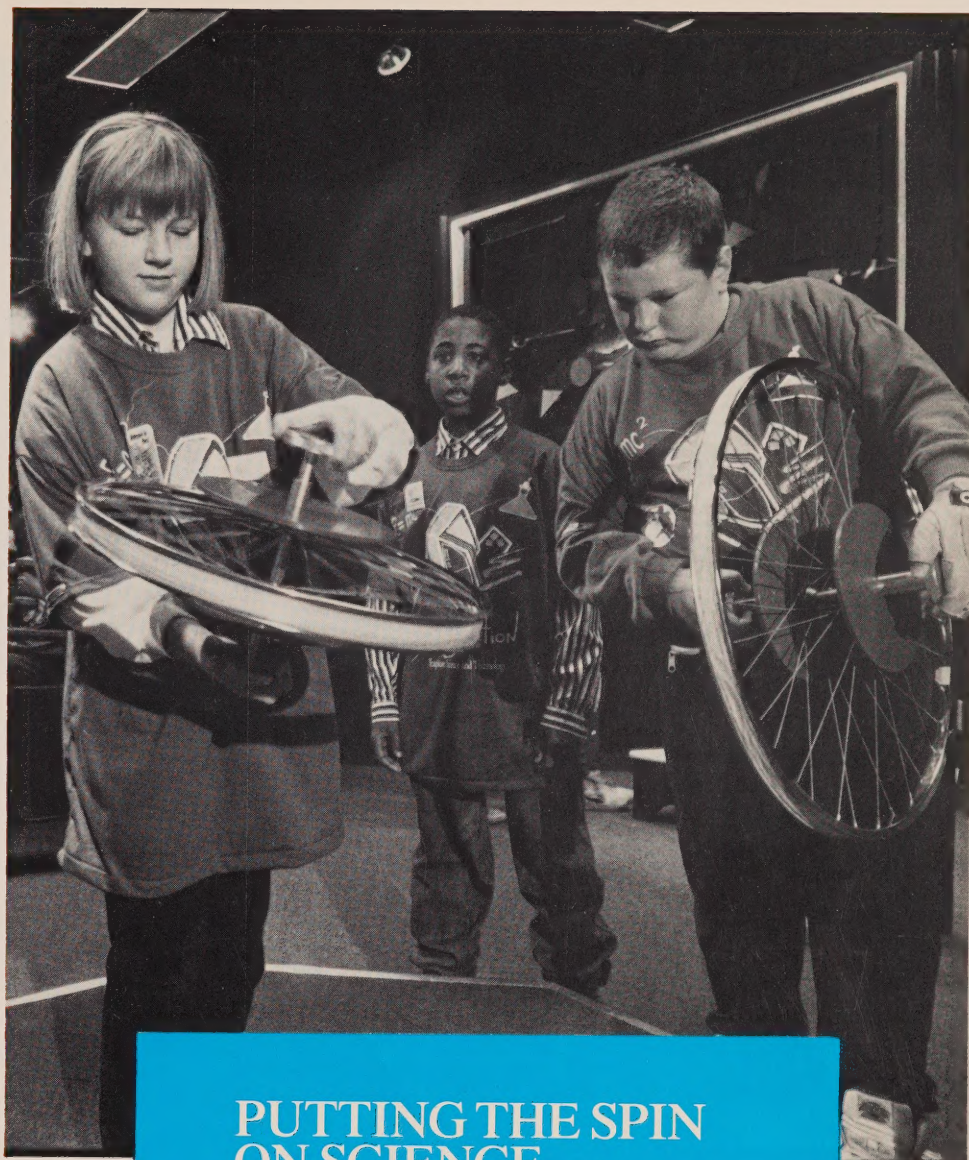


CAI
AC 10
-R16

RAPPORT



PUTTING THE SPIN ON SCIENCE

Technology is the name of the game; and, at the newly opened Discovery Centre in downtown Halifax, what a game it is! Interactive exhibits like the Rotating Platform give young (and older) visitors a chance to experience the delight and entertainment inherent in hands-on scientific discovery.

Recognizing the importance of technological education to a healthy economic future, a determined volunteer group, working with government, has made a strong investment in Nova Scotia's competitiveness — and founded it on fun.

(see *Discovery at the Centre*, page 2)



Atlantic Canada
Opportunities Agency

VICE PRESIDENT'S NOTEBOOK



Wynne Potter, Vice-President
ACOA Nova Scotia

Cooperation—the word is wholly positive. It speaks of work, common goals and mutual benefits in one breath. In the context of Atlantic regional development, it has taken on a specific and significant meaning—the Cooperation Program of ACOA, that component of the Agency whose broad purpose is to enable the federal government to work in partnerships within each province to establish a receptive economic environment in our region.

The Cooperation Program is built on the premise that the sectoral priorities of both levels of government for an individual province can be better established and met through joint consultation, negotiation and shared financing than through the separate initiatives of governments and industry groups.

But the Cooperation Program, in keeping with the innovative character of ACOA, opens the process to some altogether new ideas and directions. The cover story on the Discovery Centre in Halifax is one good example of this. Elsewhere in this issue of *Rapport* we highlight some cases in which the Cooperation Program is working to build markets and increase competitiveness in the areas of forestry, minerals, agriculture and technology. We also note the recent signing of the latest such program, the \$63 million Canada–Nova Scotia Cooperation Agreement on Industrial Development Opportunities.

The development in Nova Scotia of highly-skilled professionals for the travel and tourism sector is the subject of another story of particular interest. With the graduation of the first class of students in the Bachelor of Tourism and Hospitality Management degree program at Mount Saint Vincent University in Halifax, the Co-operative Education model proves its unique value in giving higher education a component of highly practical, out-of-classroom experience.

Rapport's coverage also includes the recent opening of the Environmental Test Centre, which offers a highly marketable (and exportable) technological service to industry. I hope you enjoy these and other features. And, as usual, I would welcome your comments as a reader on the content of *Rapport*.

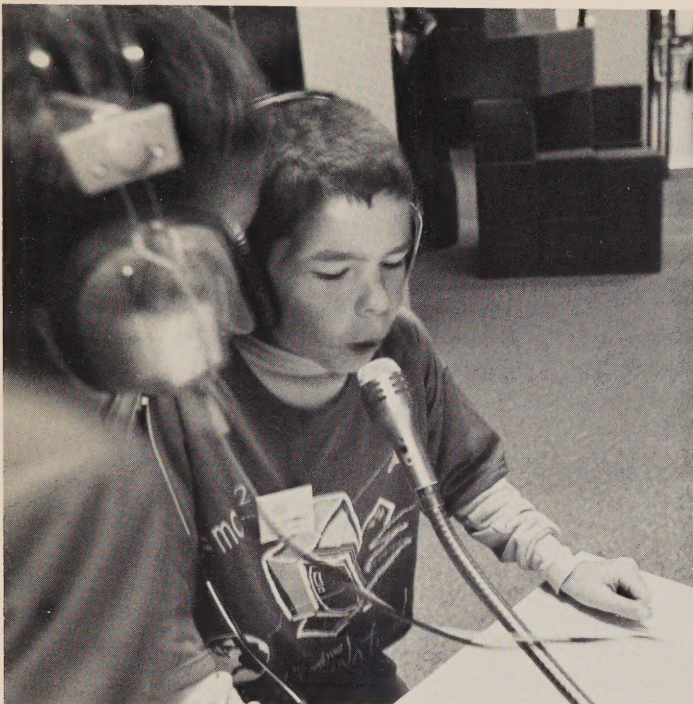
DISCOVERY AT THE CENTRE

This place is
the most
interesting
place I ever
been it was
totally
cool.

The author of that enthusiastic statement is anonymous. But the name doesn't matter; nor do the few minor lapses in spelling, grammar and punctuation. The importance of the neatly lettered note is the evidence that a young mind has been stimulated and delighted through the adventure of discovery.

Small wonder that Tom Nickerson takes such pride in this scrap of paper and the dozens of similar testimonials pinned alongside it on a bulletin board in the newly-opened Discovery Centre in the Upper Mall of Scotia Square in downtown Halifax.

Nickerson, Chairman of the Board of Directors of Discovery Centre, is one of those who helped bring about this wonderland where ping-pong balls float in mid-air, wooden cylinders seem to roll uphill, and people appear to grow or shrink as they cross a distorted room. In each case the challenge for young visitors—and older folks too—is to figure out why and how these and many other hands-on exhibits work. “We don’t give people the answers,” says Nickerson, who is also President of the Nova Scotia Research Foundation Corporation. “They end up making the discovery themselves.”



Some of the carefully-tested games and puzzles are arithmetical or geometric: scales that weigh numbered wooden plaques until the totals literally balance; drinking straws fitted into geometric shapes; and a pendulum that trickles parabolas of sand onto a tabletop as it swings. Others are practical demonstrations of engineering techniques, such as an arch, assembled from loose wooden blocks, that easily bears a person's weight. Electronic demonstrations like an oscilloscope that creates "voice patterns" as a person talks are popular, too.

While the exhibits in the Discovery Centre may be of a scientific nature, they're intended to translate into other areas of thinking and lead young minds to realize that learning of any sort can be a very enjoyable process. One group of games is called Mathfun — something that many older visitors would have found a contradiction in terms during their own school days. In fact the Centre is such guaranteed good fun that, in addition to class visits by the busload it's available for private birthday party bookings.

Major funding for the Discovery Centre was provided through the Canada–Nova Scotia Cooperation Agreement for Halifax–Dartmouth Metropolitan Area Development. Its recent opening was the culmination of several years of preparations, both in the development and testing of exhibits and raising of additional funding from the private sector by a volunteer Board of Directors. "Everyone involved has worked hard for a long time," says Nickerson. "When ACOA and the Province provided a financial boost under the Agreement, it meant we were on our way at last."

Price of admission to the Discovery Centre ranges from \$2.50 (for children from five to 12 years old) to \$12 for an entire family. But the Centre is keen on promoting the rewards of annual membership, available from Junior Scientist level (children to age 12, \$10) on up. Members receive free admission for one year, the Discovery Centre Newsletter and invitations to "members only" events and previews.

But the biggest reward the facility offers anyone of any age is suggested by the words of the Chinese proverb quoted in the Discovery centre brochure: "When I hear, I forget; when I see, I remember; when I do, I understand."

COOPERATION — on course

For Nova Scotians, the Cooperation Program has meant such progressive federal–provincial initiatives as the Forestry Development, Agri-Food Development, Technology Transfer & Industrial Innovation and Mineral Development Agreements now in place. The latest Agreement to be signed by ACOA and its provincial partners in the Nova Scotia Department of Industry, Trade and Technology is the Cooperation Agreement on Industrial Development Opportunities. Among its specific priorities are the development of human resources, an enhanced research capability, expansion of trade, attraction of new investment, creation of business development opportunities and resource competitiveness.

Listed below are names and total funding of Agreements within Nova Scotia which have been entered into or expanded since ACOA began.

Agreement	Amount
Forestry Development	\$45 million
Mineral Development	\$9 million
Fisheries Development	\$8 million
Technology Transfer & Industrial Innovation	\$34 million
Halifax–Dartmouth Metropolitan Area Development	\$209.2 million
Agri-Food	\$60 million
Industrial Development Opportunities	\$63 million
Economic Planning	\$4 million



MICROCHIP MAGIC MAKES MARKETS



Engineer Ted Bushnik adjusts a stereoscope as he checks a circuit board used in one of the high-tech systems designed and manufactured by Iotek Incorporated of Halifax.

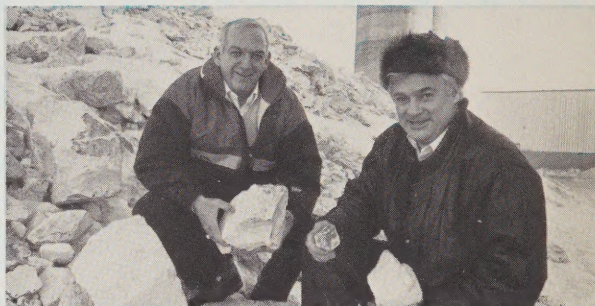
Iotek Incorporated of Halifax is not only a textbook example of Atlantic Canadian entrepreneurship at its best—the company is also demonstrating how effectively technology transfer can lead a province like Nova Scotia into global markets through specialized high-tech products with good growth potential.

Iotek began as a one-man operation in 1986, when the Applied Microelectronics Institute established the company to find applications and markets for some of the technologies the Institute had been working with. AMI electronics engineer T. Logan Duffield was installed as president. A few months later Duffield bought the new company. Then he began taking Iotek from software design to product development to manufacturing, installation and servicing of high-end technical systems, most of

them related to radar and sonar based surveillance, navigation and environmental applications.

"Iotek's in a very expensive business," says Duffield. "If you want to move from design to production and service, you have to make some serious capital expenditures on equipment. That's where the Technology Transfer Agreement of ACOA's Cooperation program came in." The Agreement provided assistance of \$204,000 toward the cost of \$570,000 worth of equipment which, says Duffield, allowed Iotek to make the all-important move from design to production, and to expand at a 35 per cent growth rate and land new government and private sector customers—including such major international players as Litton Industries and Raytheon.

NEW PROMISE FOR A N.S. MINERAL RESOURCE



There's more to a chunk of anhydrite than meets the eye. Cape Minerals Vice President Corporate Planning Sheldon Brown and company President Steve Farrell are working on a promising application for the gypsum-like material in Nova Scotia's coal mines.

How do mineshaft roof supports come into the Cooperation Program picture? Through Cape Minerals of Cape Breton and the Mineral Development Agreement's Investment Stimulation Program. Anhydrite, which is most simply described as gypsum without water content, is generally unsuitable for traditional gypsum applications such as wallboard—among other reasons, because it doesn't hold nails and fastenings as well.

Cape Breton entrepreneur Steve Farrell had an idea that the strength, hardness and fast-setting qualities that make anhydrite less than useful for drywall manufacturers, might make it a promising material for other applications. He thought about the fact that close to a million Nova Scotian dollars were being spent each year to import from the U.K. the material used to construct the type of continuous column roof support demanded by modern coal mining methods. Local anhydrite might be able to do the job as well or better, but the idea would need a lot of research and testing.

In 1987 Farrell sent anhydrite samples for lab testing to determine the feasibility of his idea. Soon, the word came back: the material's properties should make it even stronger and more durable than the traditional imported product.

Farrell established his company and approached the Technical University of Nova Scotia for further research. Next came a small pilot plant and underground testing of the material as roof support in a short section of working shaft.

The project is now moving ahead rapidly. A larger plant is under construction, and the newly-developed anhydrite roof supports will be put into practical use in routine mining operations at the DEVCO Lingan mine. Farrell is not only optimistic that the next two years will see the method become the standard in Nova Scotia coal mines, but feels it will draw interest from other North American markets as well.

NOVA SCOTIA APPLES — OUTSHINING THE COMPETITION



Quality is a family concern at J.W. Mason & Sons Limited. Left to right are brothers Brian, Steve and Jim Wells with their grandfather John Wesley Mason, company founder and President.

In Nova Scotia's Annapolis Valley, apples are hardly innovative — they've been a cash crop on which a largely horticultural economy has depended from the time of the first settlers. But innovation in preparing the tasty Macs, Cortlands and Gravensteins for market has become essential. One of the largest marketers of fresh apples in the area is J. W. Mason & Sons Limited. The company owns some 60 acres of orchards and packs and markets the output of some 60 other farms.

In recent years J. W. Mason has become one of Nova Scotia's leading private operators of controlled atmosphere storage facilities and state-of-the-art processing and packing lines. Apples can no longer be dealt with as a commodity crop in today's highly competitive markets. These days, they're more like individual specialty items. Size, cleanliness, shine, colour, uniformity — all must be near perfection to win maximum consumer appeal.

That's where the Agri-Food Cooperation Agreement has come into the plans of J. W. Mason & Sons Limited. Vice President Jim Wells says the program helped a family farm become a major marketer in Atlantic Canada (and, if present plans succeed, well beyond). The latest assistance has come in the form of a \$230,000 contribution to the new \$550,000 computerized processing line that gently washes, waxes, colour sorts and weighs apples to leading-edge specifications.

Jim Wells says, "Back in the '80s we took a look at where we were in the marketplace and where we thought we could go. Only first-rate storage and processing facilities provide a fresh fruit product that's attractive enough to beat out the others." In other words, Mother Nature can't do everything — it's modern technology that puts the final polish on the apple.

TENDING TOMORROW'S TREES TODAY



Brookfield Lumber Co. President Ron Creelman believes in assuring high quality in tomorrow's forest products — today.

The crop that Brookfield Lumber Co. depends on doesn't grow on trees — it is trees. The company owns over 15,000 acres of mixed woodlands near Truro providing a major source of income for area contractors who cut, skid and truck the raw material to Brookfield's sawmill. Like other Nova Scotia forest operations, the company wants to assure a good yield of high quality, profitable and easily harvested trees for the future.

One of the most promising management methods is to clear land of unwanted species so that the seed of remaining mature trees doesn't have to compete for space and nourishment. That way, when the parent trees are cut, a predominantly high-value replacement crop is already established. The catch is that it's a labour-intensive technique that can't even begin to pay back any dividends for years.

Brookfield Lumber President Ron Creelman believes in the value of long-term management techniques, and the company

has been managing a 300-acre tract in this way for several years using a crew of eight of its own employees. "It's a project we might have tried to do on our own," he says, "at least to the extent that we could afford to — which would probably not be very much. The Forestry Agreement allowed us to do the thing on a proper scale. We're learning what kinds of growth area are most likely to respond to this method and we now see stands where the new crop is seeding in very well."

Creelman points out that the forest industry requires much longer-term strategies than most and that a sustainable future can only be developed with the cooperation of private operators and the provincial and federal governments. "The work is slow and very expensive," he says. "This kind of joint effort is really essential to the commercial future of Nova Scotia's woodlands."

COOPERATION—VITAL TO THE NOVA SCOTIA ECONOMY

Excerpted from an address to the Liverpool Board of Trade by Peter B. Lesaux, President, Atlantic Canada Opportunities Agency

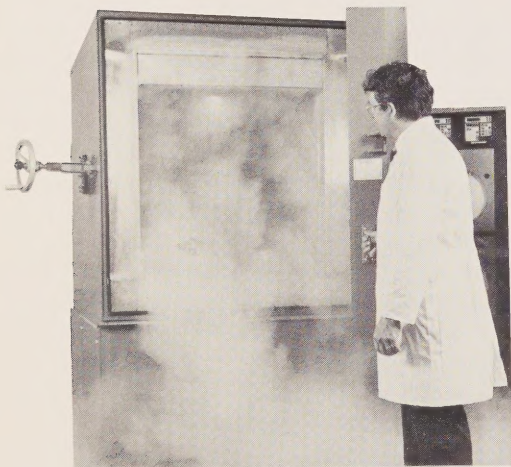
Products and services generate trade. Entrepreneurship generates new products and services. And ACOA is dedicated to the support of entrepreneurship. It's really just about that simple in principle, and not far different from the challenge faced by the early colonists of Nova Scotia who established the commerce of

this province. What allowed them to do it was as much the innate human resources that they brought with them—including entrepreneurship and cooperation—than the natural resources they found in place. Natural resources will remain part of the picture, but the days when we could depend on them totally are gone.

In a sense, what we have to do is put ourselves in the shoes of those early Nova Scotians—look around at the realities, and create in ourselves what it takes to succeed on the basis of what we see. What we see today is greater global integration, with niche markets available to the most competitive entrant; what we see is greater opportunities in the export of services; what

we see is changes in technological applications; what we see is that employment growth is becoming concentrated almost entirely in small businesses.

And to create a better future, what we have to do is create the conditions which encourage and nourish small business. The more we can upgrade our energies, our skills and our imagination, the greater will be our ability to change our future for the better.

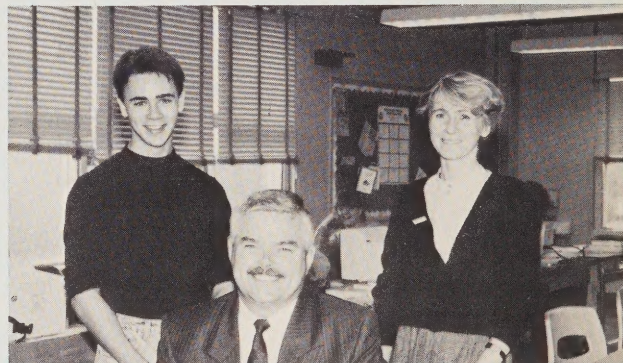


PUTTING THE HEAT ON PROTOTYPES

The Environmental Test Centre, located at the Nova Scotia Research Foundation Corporation in Dartmouth, is now open. Here, Manager Neil Richter opens the door on a technological torture chamber that can

deliver a sudden drop from 200 to -73 degrees Celsius under a wide range of humidity conditions.

The Environmental Test Centre also offers materials testing and test consulting services. Contact Neil Richter, Manager 424-8670.



Leonard Sarsfield, President of Sarsfield Foods, recently took time out of his busy schedule to give advice on how to run a business to students at Kingstec Community College. Sarsfield has more than adequately illustrated his entrepreneurial skill by starting a kitchen-table operation for making apple pies and turning it into a successful business with annual sales of \$17 million. Sarsfield is shown here with students Mike Henley and Grace Banach at the ACOA-sponsored session.

His advice:

- Have good people skills.
- Have basic business knowledge.
- Be committed and not easily discouraged.
- Have a product that there's a need for.
- Be patient and realistic; success does not come overnight.
- Get some good hands-on experience in a similar type of industry.
- Care about details.

SUPPLIER DEVELOPMENT SERVICE —LEADING THE PACK

Governments, federal, provincial and municipal, are sources of attractive business opportunities—but competing for them can be a very challenging task for potential bidders unfamiliar with bureaucratic procedures and intimidated by the sheer volume of government contract activity. Many simply lack the time and staff to examine hundreds of project descriptions looking for jobs that might match their firm's capabilities. Daunted by red tape and unable to undertake the necessary research and paperwork, they reluctantly opt out.

Enter SDS—the Supplier Development Service, a division of Atlantic Canada Plus. The SDS Program was created, with ACOA as the major startup funder, to foster an environment where Atlantic Canadian businesses can increase and simplify access to public (and even private) tendering procurement opportunities at the regional, national and international levels. The core of the program is a computerized bid search and identification system, through which clients tap into a database on government departments and agencies and their tender calls, and which alerts them to specific business opportunities.

Marg Cartwright is Supplier Development Service Manager for Nova Scotia. Getting the SDS Program into overdrive throughout the province is clearly a high point in her 14-year business development and marketing career. In her 14th floor office in Dartmouth's Metropolitan Place tower she lays the challenge on the line:



Marg Cartwright, Supplier Development Service Manager for Nova Scotia with co-workers Barbara Dunham and Peter Fardy.

"The backbone of our economy is small business, and SDS is supposed to be a private sector business itself. We're here to show suppliers—especially the smaller operations—of goods and services that there's a lot of business out there they could be getting, and where they can get it. We'll be the matchmakers."

Currently, SDS has eight government agencies on stream, including such big federal buyers of goods and services as Public Works Canada and the Department of Supply and Services. Cartwright points out that, as it expands, the Program will link more and more buyers to sellers in the Atlantic region. "Be they public institutions, large multinationals or local businesses," Cartwright says, "they all feed our economy." She adds that SDS has imposed few limitations on itself as it

broadens its database. "Public sector, private sector, municipalities, provincial, federal buyers—we want them all on-line. In fact, there's really no reason why we shouldn't eventually be looking at state and federal government contracts south of the border, especially in the climate of Free Trade."

Cartwright is running well ahead of projections in marketing the Supplier Development Service in Nova Scotia, with over 110 clients signed on during the 1990 startup season. For a fee of \$425 per year, such businesses as printers and publishers, machine shops, plastics fabricators and electrical suppliers (nearly half of them located outside the Halifax-Dartmouth metropolitan area) are now registered

clients of SDS. "We already have a very credible presence in the Nova Scotia market," says Cartwright, "which we'll be building on during 1991. We're working hard to bring more service sector, construction and contracting clients into the program. One thing that pleases us is that we represent both large, sophisticated operations and small entrepreneurs in specialized market niches."

The fact that getting SDS up and running hasn't been easy has made the early successes all the more rewarding. "This whole setup is a complex job, because there aren't any Canadian precedents to use as models," Cartwright notes. "But on the other hand, it's great to know we're leading the pack!"

For information on Supplier Development Service, a Division of Atlantic Canada Plus, call (902) 453-2220.

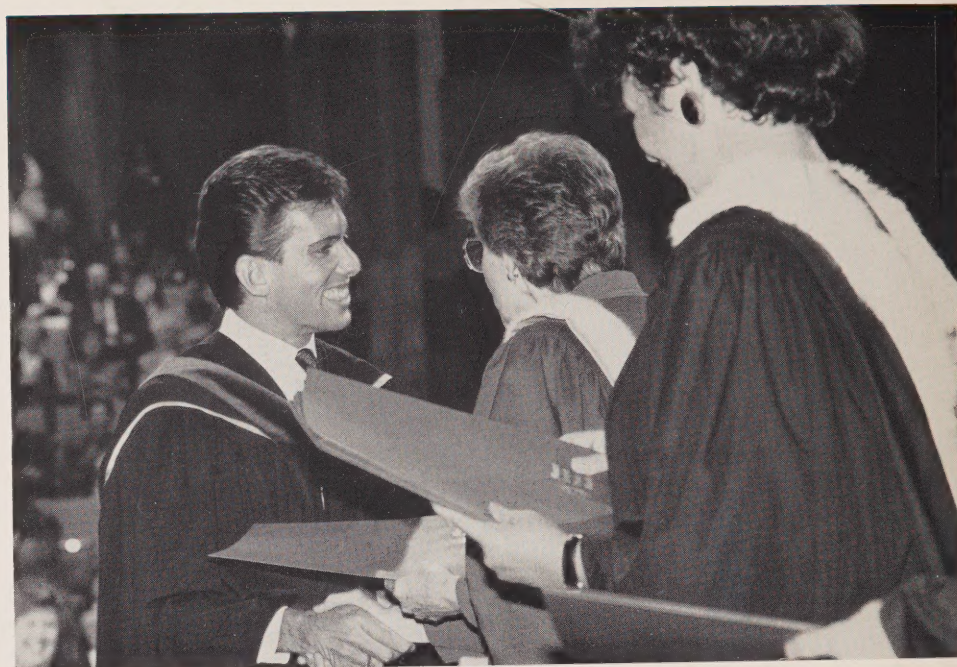
TOURISM AND HOSPITALITY MANAGEMENT —MSVU MEETS THE NEED

Mount Saint Vincent University has become the first university in Atlantic Canada to offer a bachelor's degree in Tourism and Hospitality Management.

During the 1990 Fall Convocation ceremony, 18 Mount graduates capped four years of hard work, much of it outside the classroom. The co-operative education element of the program provides students with work term placements in every sector of the travel and hospitality industry — hotels, airlines, resorts, tourism associations, agencies and departments of government, and even sailing tours and Disneyworld.

The program, established with the assistance of a \$1.8 million contribution from ACOA, maintains close ties with the industry in more ways than one. An advisory board made up of private sector operators, government tourism officials and Mount faculty reviews program content and promotes support among businesses for co-operative education.

Another facet of the Mount program will offer people already in the industry an opportunity to upgrade their own skills and credentials. The Open Learning concept, now under development, will enable working people to take the bachelor program on a flexible, part-time basis. Using a print-based package, enhanced by audio-visual, computer and other technologies, the system will provide off-campus students with access to a personal instructor, with regular assignments being submitted by mail.



Edwin Roland Frizzell was one of 18 in the first graduating class of Mount Saint Vincent's Bachelor of Tourism and Hospitality Management degree, graduating with distinction and with the highest aggregate in the program. Presenting his parchment is university president Dr. Naomi Hersom.

Professor Don Smith, the Mount Saint Vincent faculty member responsible for the Open Learning project, believes strongly that the concept will mean big benefits for the tourism and hospitality sector. "We want to serve the industry in every way we can," he says, "and that means both providing highly-qualified new managers and enabling those already in the field to upgrade their qualifications."

Cathy MacDonald is a Class of '90 graduate who did co-op work sessions at the Halifax Sheraton, at ACOA and at the Royal Antigua Resort & Casino in the West Indies (where, incidentally, she got to meet the legendary Mick Jagger of the Rolling Stones).

"But it's far from being a 'glamour career'," Cathy says of her chosen field. "The

structure of our degree is about 70 per cent business. It's a demanding industry. When you're out on a work placement, you're going to have to excel, because it's part of your degree. The professionalism and the contacts you develop leave you much more confident."

Such positive reactions to the work term element of the program have been common

among the first graduates. That pleases Professor Don Craig, Chair of the Department. Looking back on the first four years, he says, "Any new degree program means a lot of hard, ground-breaking work, but setting up a co-op education component really raises the level of challenge. This graduating class is excellent proof that we're meeting the challenge effectively."

RAPPORT is a publication of ACOA Nova Scotia and Enterprise Cape Breton.

FEEDBACK

Please send your comments and suggestions to the Editor of RAPPORT, Communications Branch ACOA Nova Scotia

P.O. Box 2284, Station "M" Suite 600, 1801 Hollis St. Halifax, N.S., B3J 3C8 or call us at (902) 426-9305/3470



Atlantic Canada
Opportunities
Agency

Agence de
promotion économique
du Canada atlantique

Canada

3 1761 11551381 4